

INSTRUCTION MANUAL FOR
EconoRed I
MODEL EC I W/ DUAL TEMPERATURE CONTROL
AND SOLID STATE RELAY



This manual contains the following documents:

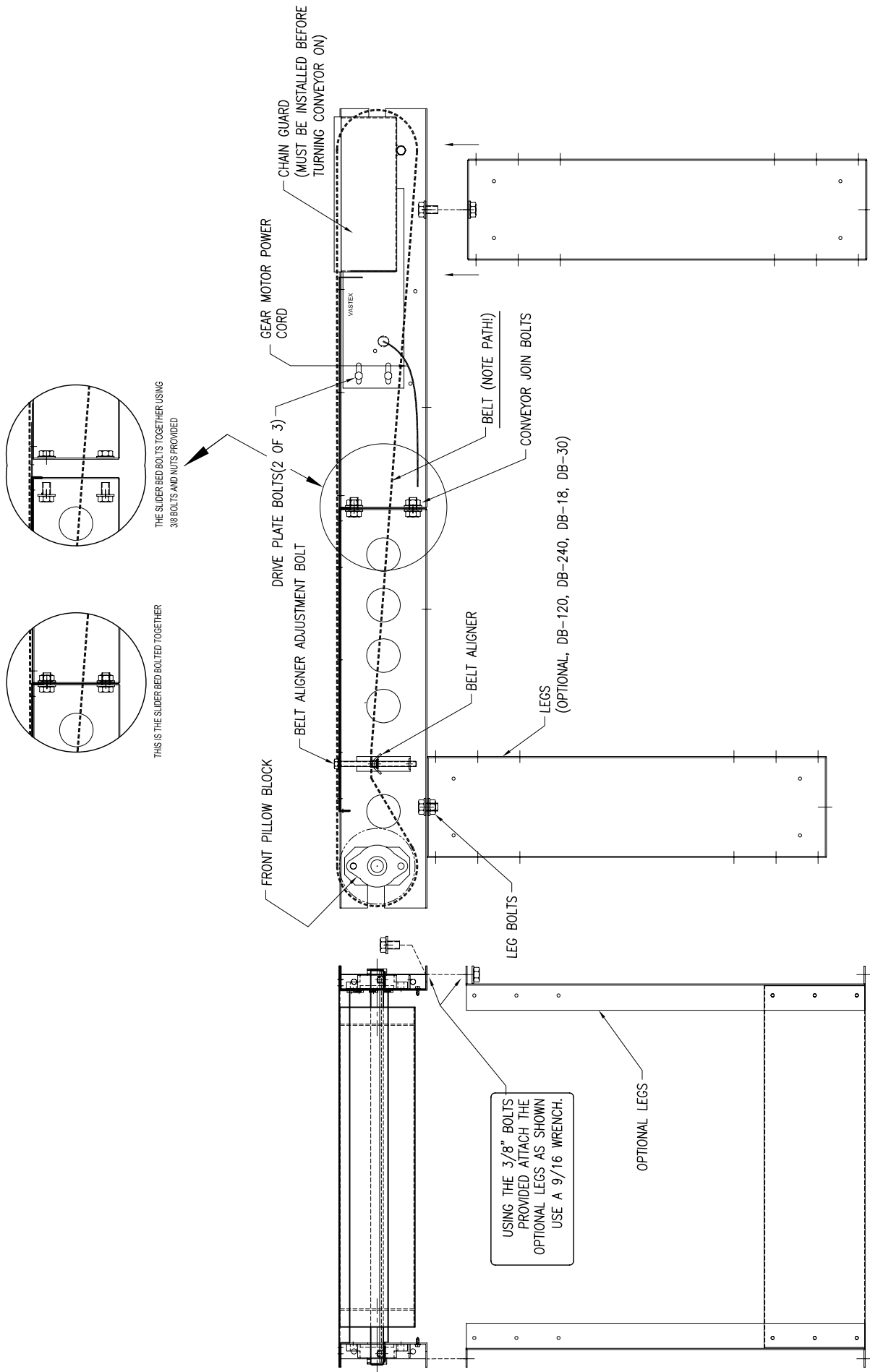
01-16-003	Conveyor Unpacking and Assembly Instructions
01-16-004	Assembly Diagram
01-16-005	Belt Tracking Diagram
01-16-006	Assembly Photos
01-16-007	Conveyor Motor, Chain and Control Maintenance
01-11-004	Operation & Maintenance
01-15-003	Dryer & Exhaust Hood Ducting
02-07-001	Point to Point Electrical Diagram
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01-00-005	Warranty
01-00-006	Warranty Summary
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See *pages 4 and 5* for assembly photos.

- 1) Please inspect for any hidden shipping damages and notify the trucking company to submit a hidden damage report if necessary.
- 2) Assemble the conveyor, see *page 4* for instructions.
- 3) Install the legs as shown on *page 2*.
- 4) Tighten all the bolts and turn the conveyor over (right side up).
- 5) Install the chain guard!

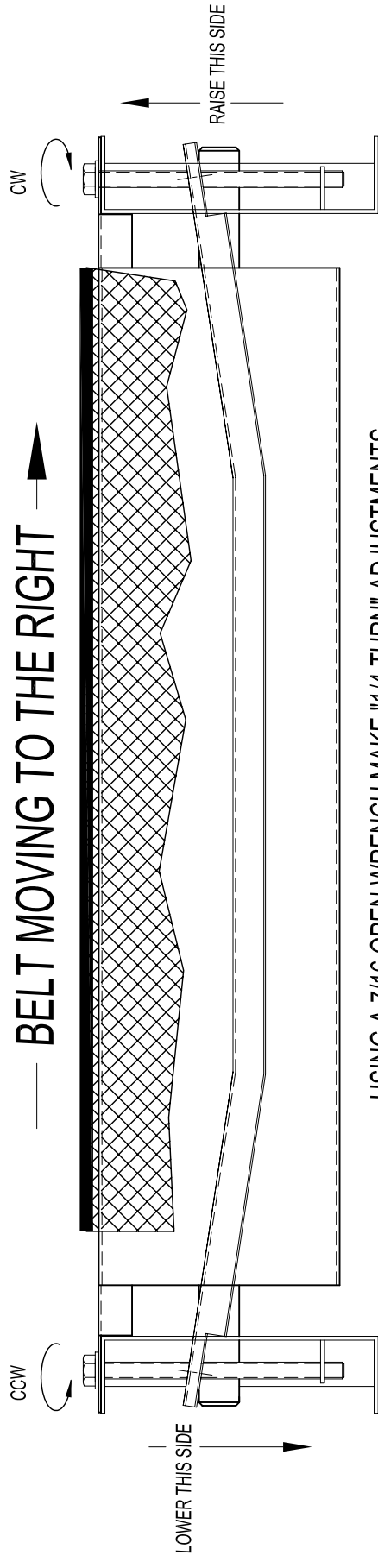
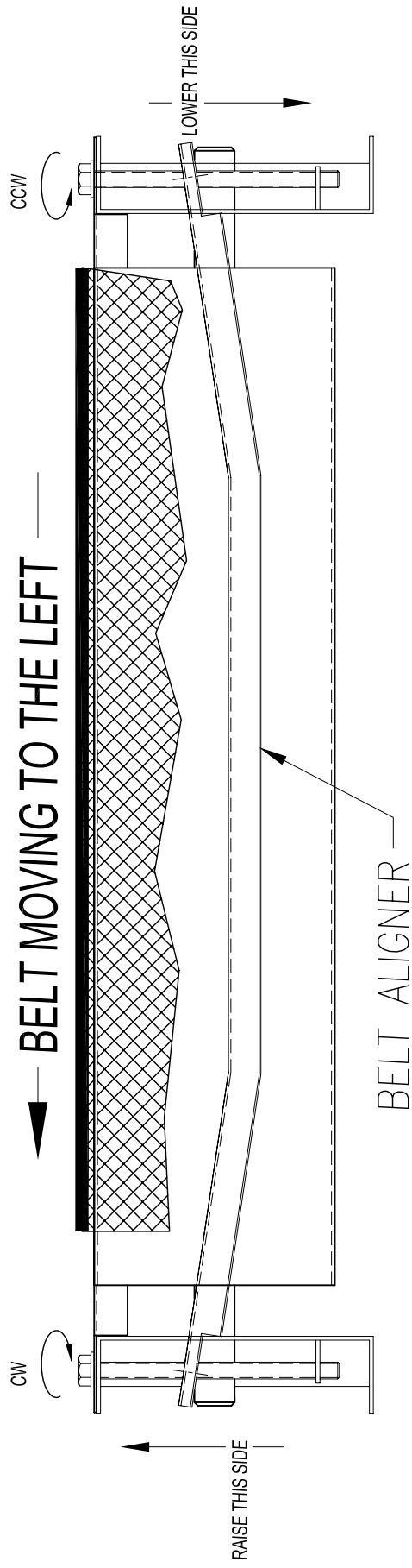
►DO NOT OPERATE THE CONVEYOR WITHOUT THE GUARD IN PLACE◄

- 6) Install belt around the pulleys and over the aligner as shown in the diagram on *page 2*.
- 7) Place the heat chamber centered on the conveyor frame with the control to the right side, same as the conveyor gear motor.
- 8) Plug in the conveyor power into the "CPC" plug on the back of the control panel.
- 9) A properly installed, dedicated, 20 amp circuit is required. The dryer has a nema 6-20p plug. Do not alter or modify the plug!
- 10) Turn on the system switch and turn up the belt speed controller. Observe the belt tracking. See the diagram on *page 3* for belt tracking information.

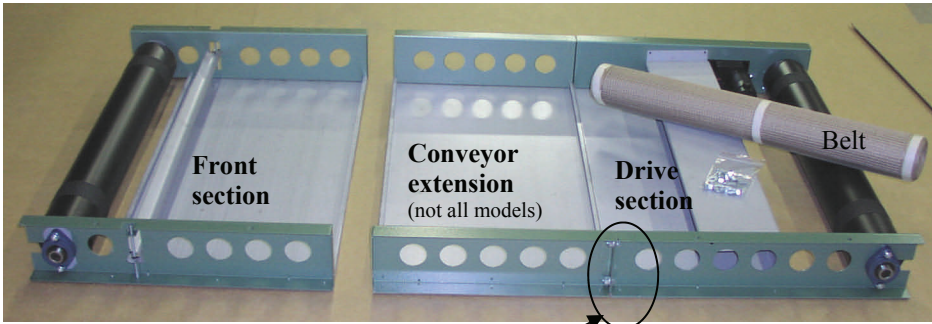


CONVEYOR DETAILS AND LEG ASSEMBLY

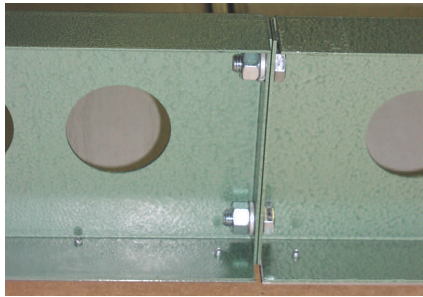
01-16-004



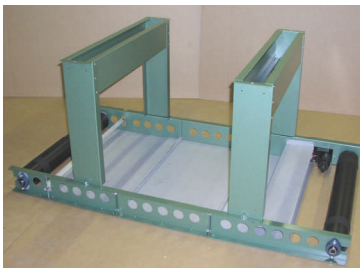
USING A 7/16 OPEN WRENCH MAKE "1/4 TURN" ADJUSTMENTS.
 WAIT 5-10 MINUTES THEN MAKE ANOTHER 1/4 TURN ADJUSTMENT
 BELT SHOULD HAVE A SLIGHT SAG ON THE BOTTOM, DO NOT OVER TIGHTEN!



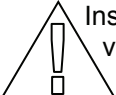
Remove conveyor parts from skid and lay out on large table or floor upside down as shown.

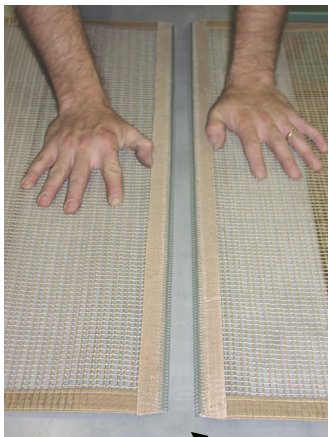


3/8-16 x 3/4 long bolts with lockwashers and nuts are provided to connect the front section to the drive section. If your conveyor is longer than 48" there will be extensions which bolt together as shown. Please install all bolts before tightening. A 9/16 wrench will be needed to tighten the bolts and nuts. The lockwasher goes next to the nut.



If you have legs with your conveyor, bolt on as shown. 3/8-16 x3/4 bolts with lock washer, washer and nuts are provided. The lock washer goes next to the nut.

 Install the chain guard before plugging in your conveyor. The chain guard will protect you from getting an injury from the chain & sprocket.



Alligator lace



Aligner

After tightening all the bolts carefully turn the conveyor onto its feet or your table. The belt needs to be installed as shown on **page 2** making sure you thread it over the aligner. Install the pin into the alligator lace and make sure the two ends of the belt are centered to each other. If one person positions the belt ends and holds the belt into position, a second person can install the pin. Be sure when pushing on the pin you grip it close to the belt, if the pin bends it will be difficult to remove the kink in the pin. Plug the motor's power cord into the "CPC" plug on the back of the control box. The numbers on the dial are for reference only. Time the belt with a watch and set the speed to the desired seconds in the heat.

Econored-I conveyor motor, chain and control maintenance.

In order to adjust the chain tension or remove the control assembly, the chain guard must be removed.



Chain Guard

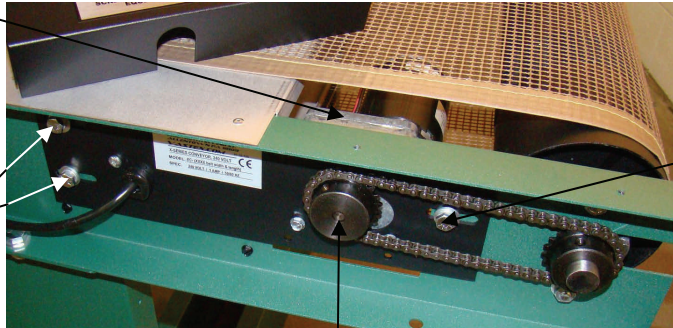
To remove the chain guard: Unfasten the two black sheet metal screws at the top. Be sure to replace the guard after adjustment is made.

XC-DRIVE CHAIN ADJUSTMENT

Gear Motor
(04-02-005) Standard 90vdc gear motor shown

(Optional H.D. Motor available)
(04-02-039)

Control assembly mounting screws (3 total)



Control assembly mounting screw (3 total)

View with chain guard removed
Motor sprocket

To adjust the drive chain you will need to loosen the 3 Control assembly mounting screws. The Drive plate is slotted to allow the entire assembly to slide left or right to loosen or tighten the chain. Adjust any slack out of conveyor chain.

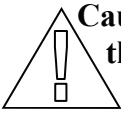
CAUTION! Do not over tighten chain, damage to bearings may occur.

CONVEYOR BELT SPEED ADJUSTMENT

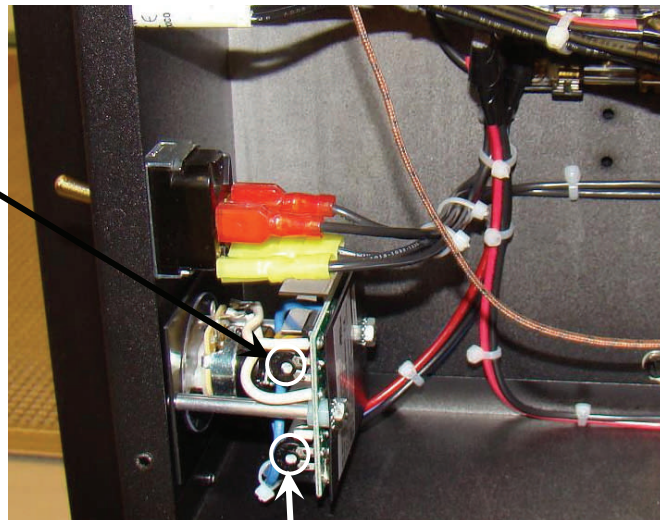
Setting the low speed pot adjustment: (small screw driver with plastic handle is needed)

Turn the speed pots clockwise to increase the speed and counterclockwise to decrease. The low speed pot should be set so the belt (or sprocket) moves very slow at the lowest setting on the controller, just before the controller is clicked in the off position. The high setting is set so 90 VDC is the maximum voltage to the motor, a volt meter is needed for the high speed adjustment.

Pot near the white wires LOW SPEED



Caution: Do not touch the open wires around the controller and the fuse holder!!



Pot near the blue wires HIGH SPEED

OPERATION AND MAINTENANCE MANUAL
FOR VASTEX EconoRed I

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1.0 INTRODUCTION:

Congratulations, you have chosen a VASTEX conveyor curing system. VASTEX has been designing and building dryers since 1960 and has the knowledge and expertise to supply a quality dryer and help you keep it running for years to come. VASTEX has innovated many of the features found in conveyor ovens today from control methods, modular features, air movements and belt tracking.

We hope the unpacking and assembly of your machine went smoothly and we welcome any comments or suggestions to help make that process easier. A licensed electrician should have completed the wiring installation and signed the warranty card. This must be returned for you to enjoy the (3) year warranty. Please read this document thoroughly as it will help you with the learning process on your new dryer.

2.0 THEORY OF PROPER CURE

2.1 CURING PLASTISOL WITH INFRARED:

Plastisol ink can fully cure in approximately 20-30 seconds. The *ink itself* must achieve 310-320 degrees to cure and fuse to the garment. Actual cure times can vary depending on conditions such as garment color, ink color, thickness, and manufacturer. Proper exhaust is important for expelling effluents from the curing chamber and ultimately from the work environment.

3.0 HOW YOUR VASTEX DRYER MEASURES TEMPERATURE

3.1 DRYERS WITH SENSOR BASED CONTROLS:

The control system in your dryer is generally characterized as a “closed loop system”. The controller has a sensor wired to it which is located under the heater. A shield around the sensor helps to isolate it from rapidly changing environmental conditions. The output of the controller connects to the relay coil. The coil actuates the relay output which is capable of handling the high amperage needed to power your heaters. The relay sends power to the heaters when the controller calls for heat. The controller's job is to try to make the sensor input temperature match the set value (this is what the operator sets). When the set value temp is higher than the temp the sensor is detecting, the controller turns on and tells the relay to send power to the heaters.

3.2 DRYER CONTROLS:

It is important to understand the difference between the temperature at the sensor and the temperature at the garment, or more accurately, *in* the ink! Because we locate the sensor directly under the heater, it sees a much higher temperature than seen at the substrate. You must set the temperature higher to compensate for the difference. Temperature tapes, when used properly, are one way to determine the temperature of the ink. *Submerging the tape into the ink* will measure the internal ink temperature as opposed to the tape temp. Remember it's the INK temp you really care about, not the air temp. Both the set point and the distance between the garment and heater will affect the ink temp. We generally start with 750 degrees set point, 25 seconds in the tunnel and 3" distance between the heater and substrate. Then make adjustments thereafter to achieve a full cure.

(Note: You are curing with infrared heat. Infrared, when at high temps, emits a wave length which will heat up the ink faster than the garment. Running the machine at lower temps and slower speeds will be inefficient and can cause scorching because the garment will lose its natural moisture in time).

4.0 OPERATOR INTERFACE (Controls)

The controls include: system fuses (inside control box), a heat on switch, a belt speed control, a temperature control, a coil light, an output light and a power light.

4.1 SYSTEM FUSES:

Two fuses located in the control box protect all the electronic controls.

4.2 HEAT ON:

This switch turns on the power to the temp control and relay. Because the heat switch and belt control are separate you can shut off the heat and leave the belt running for 10 minutes to cool down the dryer.

(Caution: This does not shut down power to all machine systems. For maintenance or any entry into the machine, you must unplug the unit to prevent electrical shock.)

4.3 BELT SPEED CONTROL varies the speed of the conveyor belt. Dryers equipped with an optional DC volt meter can use the table below as a reference for setting belt speed. **These times are based on a 20" heat chamber, a 15 tooth motor sprocket, and a 22 tooth pulley sprocket.**

TIME THRU CHAMBER	VOLTS	TIME THRU CHAMBER	VOLTS
15 Sec	45 V	40 Sec	19 V
20 Sec	33 V	50 Sec	15 V
25 Sec	28 V	60 Sec	13 V
30 Sec	23 V	70 Sec	12.5 V
35 Sec	21 V	80 Sec	11 V

4.4 TEMPERATURE CONTROL

Tempco Microprocessor Based Auto Tune PID Controller is used on this unit. Automatic Tuning of controller has been performed at the factory for all 240v machines. Refer to section 4.4.1 for Automatic Tuning. The front of the control has two digital readouts. The top is the "Process Value" (PV), which is the actual temperature at the sensor. The bottom is the "Set Value" (SV), which is the temperature you set the machine to. All values are in Fahrenheit degrees. But can be changed to display in Celsius. There are four buttons along the bottom of the control unit. The two on either side that are oval shaped with arrows are for setting operating parameters. (Factory set. Do not attempt to alter without first consulting a VASTEX factory rep.) The two buttons in the middle, the "up arrow" and the "down arrow," are for adjusting the "Set Value"(SV). A green light (CON) will illuminate when the controller is calling for heat (output on). A red light (ALM) will illuminate when the actual temp is higher by some predetermined amount than the set value. With the power on, push the up arrow and the SV temperature will climb. The longer you hold the button, the faster the SV will climb, it will start climbing by one, then ten, then hundreds. Set the desired temperature and allow approximately 15 minutes for heat up. As the temperature at the sensor approaches the set point, the controller starts to cycle off & on to slow its rise. The first

couple of times the controller is used it may overshoot the set point while it's learning the characteristics of the heater. YES, the controller does teach itself how to respond to the heaters. Refer to the trouble shooting section for Controller Error Messages.

4.4.1 AUTO TUNING

Automatic Tuning has been performed at factory for all machines. Automatic Tuning must be performed by the customer for the following reasons; When equipment is other than 240v (e.g. 208v), replacing a controller, replacing a "J" sensor, and/or new heating elements. Controller set point value must be set between 700 to 750 degrees before beginning auto-tuning.

- Procedure:
- a.) Press the return key for at least 6 seconds (maximum 16 seconds). This initializes the auto-tune function. (To abort auto-tuning procedure, press and release the return key.)
 - b.) The decimal point in the lower right hand corner of the PV display flashes to indicate that auto-tuning is in progress. Auto-tune is complete when flashing stops
 - c.) Automatic Tuning may take up to ½ hour. Remember, while the display point flashes, the controller is auto-tuning.

Note: If an AT error (AtEr) occurs, the automatic tuning process is aborted due to the system operating in ON-OFF control mode (PB=0). The process will also be aborted if the set point is set too close to the process temperature or if there is insufficient capacity in the system to reach the set point (e.g. inadequate heating power available). Upon completion of auto-tuning the new PID settings are automatically entered into the controller's non-volatile memory.

4.4.2 MANUAL MODE

Press and hold both the scroll and return key for 6 seconds to enter manual mode. Display on controller will show H000. Press the up or down arrow to set percentage of time the heater will cycle on and off. (i.e. a setting of 80.0 will cycle heater on 80% of time and off 20%). Controller can remain in this mode while resuming production. Replace malfunctioning "J" Sensor and proceed with Auto Tuning.

4.5 CONTROL OUTPUT LIGHT

This 250 volt GREEN pilot light is wired to the output side of the temperature controller. This light should cycle on & off with the controller. It verifies that the controller output voltage is going to the relay coil.

4.6 RELAY OUTPUT LIGHT

This 250 volt RED pilot light is wired to the output side of the relay. This light will cycle on & off with the controller and the coil light. It verifies that the relay is working properly. It should turn on and off exactly at the same time as the coil light and the controller output light.

4.7 POWER LIGHT

This light is located on the side of the diagnostic section of the control panel. It is wired to the line cord and will be illuminated whenever power is coming into the unit.

(Caution do not enter any part of the machine as long as the power light is on. Unplug the dryer before entering any part of machine!)

5.0 OTHER ELECTRICAL COMPONENTS

5.1 SOLID STATE RELAY (SSR)

This is the switching device which sends the power to the heaters. The relay coil is wired to lug #9 on the digital temperature controller. As the control gets a signal from the sensor, for heating or cooling, the relay opens and closes its non-mechanical contact to modulate power and maintain a consistent temperature. The SSR is mounted to a heat sink which pulls the excessive heat, generated during operation, from the bottom of the relay. It is imperative that the relay is mounted to the heat sink which is factory assembled and should not be separated.

5.2 TYPE “J” SENSOR

The sensor is mounted just beneath one heating element with a shield beneath it. The sensor is wired to the temperature controller using two wires, a red (positive) and a white (negative). They must be attached to the proper terminals on the controller. Refer to wiring diagram when replacing “J” Sensor. (if SBER is displayed on controller “J” Sensor is malfunctioning)

5.3 GEAR MOTOR

A 90 Volt DC gear motor is located to the rear of the conveyor. It drives the rear pulley and belt via a roller #25chain and 25B22 sprockets. A one amp fuse is located on the belt control box to protect the belt control.

5.4 EXHAUST (optional) (See Page 13, Doc: 01-15-003, for more info)

A 120 or 240 volt squirrel cage fan is located in an add-on unit to the rear of the heat chamber. The fan has a 4" duct connected to its output on the topside of the chamber. The exhaust duct should be vented outside to expel fumes from the room. It is recommended to install an exhaust booster fan if 6 foot of duct and/or more than one elbow is added.

(Note: Restricting the fan’s operation can affect the operation of the dryer and cause excessive fumes to fill the chamber and work area.)

5.5 INFRARED HEATERS

The quartz fabric infrared heaters in VASTEX dryers are state of the art made with the finest materials available. They emit medium wave infrared heat, perfect for curing plastisol inks. They will give years of continuous efficient service. The heater connections are located in the trough outside of the heater connected with high temperature terminals and 10/32 stainless steel socket head cap screws. This makes repair or replacement a rare but simple operation. There is one 24" wide x 18" deep, 3500 watt heater in the heat chamber

6.0 CONVEYOR

6.1 BELT

The conveyor belt is made of Teflon coated fiberglass. It is joined together with an alligator lace using a steel pin to connect each side. The belt will not burn under normal conditions but the dryer should always have the belt moving while the heaters are above 300 degrees. The belt should remain tracked in the center of each pulley. (See “Belt Installation and Tracking” for adjustment instructions.)

6.2 ALIGNER

The aligner is a device for tracking the belt and keeping it on the pulley. As the belt moves from side to side the aligner is used for adjustments to keep it centered. The belt does not have to be perfectly centered on the pulley but should not be hanging over either edge.

6.3 PULLEYS

The pulleys at either end of the conveyor are made by VASTEX of 4 ½ inch tubing with ¾ inch center shaft. They are mounted on self aligning flange bearing blocks for precision rolling.

7.0 MAINTENANCE

Your VASTEX dryer has few points that need maintaining. The most important first step is to follow the unpacking and setup instructions. The proper electrical hookup and exhaust duct installation will insure the most can be achieved from your investment. **Turn off power at your disconnect before entering any part of the machine.**

7.1 ELECTRICAL CONNECTIONS

Electrical connections will loosen in time from heating and cooling. Every three (3) months the **power should be turned off** at the external disconnect and all the points of connection should be inspected and tightened.

7.2 LINT BUILDUP

As with your clothes dryer at home lint will build up where ever air is flowing over garments.

7.2.1 The optional exhaust blower, located on the rear of the machine, and any air paths leading to the blower should be **cleaned every 2-3 months** depending on usage. To perform the cleaning, remove the crank handle and black chamber cover. Remove the lint buildup and any other foreign matter around the air slots and the blower “squirrel” cage.

7.2.2 **Every six months** the top cover should be removed to clean around the heater and any other visible debris buildup.

(Note: Restricting the air flow can do damage to electrical components, inhibit your dryer’s performance and cause a fire.)

7.3 MOTOR & ELEVATOR CHAIN

Chain can loosen in time and should be inspected, tightened and lubricated when necessary.

The motor chain is located in the rear of the conveyor. And the elevator chain can be accessed by removing the lid from the top of your chamber.

(Caution: Do not over tighten chain, damage to bearings may occur.)

7.4 SPARE PARTS

VASTEX stocks parts used on current model machines. Also any older machine can be upgraded to new style components to keep their controls modern and operating. But having spare parts on your shelf can save you overnight shipping costs and the downtime waiting for shipment of parts in the event of a component failure. The only downside of buying spare parts ahead of time is the warranty starts on the ship date, not installation date.

8.0 TROUBLESHOOTING GUIDE

This manual should be read in its entirety before calling VASTEX for technical assistance. The explanations of the pilot lights and the guide below can help you to determine the cause of the problem.

(Caution! Power must be turned off at the external disconnect before entering any part of this machine. A qualified electrician should perform any internal testing requiring power on!)

Symptom:

What to check:

No Heat & power light is out.	Incoming power. Shop Disconnect, fuses or breakers. Power cord and it's connections.
No Heat and power light is on.	Check for burned out heater System fuses on control panel Note operation of pilot lights (read sections 4.4-4.7)
Heat too high	Note operation of pilot lights (read sections 4.4-4.7) (Relay can stick on or off)
Heat too low	Note operation of pilot lights (read sections 4.4-4.8) (Relay can stick on or off)
Temperature fluctuates	Check sensor location Clean sensor connections (Note: A fan blowing into the chamber or an open door can cause the temperature to wander) Note operation of pilot lights (read sections 4.4-4.7)
Belt stopped or is erratic.	Check plug at motor power cord. Check sprocket and chain. Check output voltage at plug (should be 0-90 VDC) Check for obstruction in belt path Check belt tension. Check Brushes on Motor. (only on optional HD motor)

Vastex E-mail assistance

Purchasing & Product Info:

sales@vastex.com

Electrical Support:

stech@vastex.com

Tech Support, Mechanical Setup, and Operation

techsupport@vastex.com

Screen Printing Issues & Support:

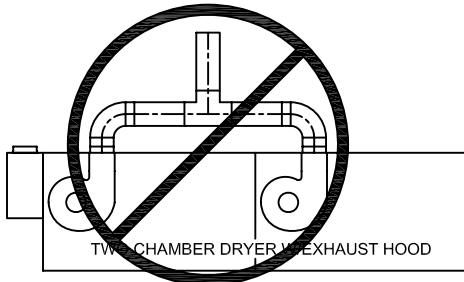
printech@vastex.com

IMPORTANT READ BEFORE OPERATING DRYER

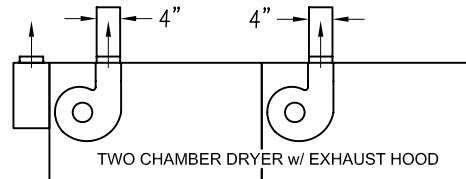
Restricting the dryers exhaust will effect the operation of the dryer. Excessive heat buildup within the chamber may damage the exhaust blower. Proper venting is important.

EC-II SERIES SINGLE & DOUBLE CHAMBER DRYERS

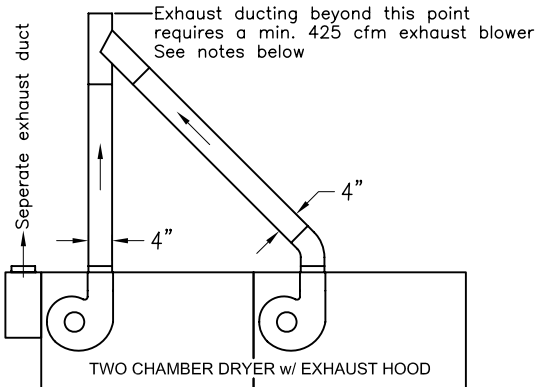
The Exhaust Hood is an option for all Vastex Dryers



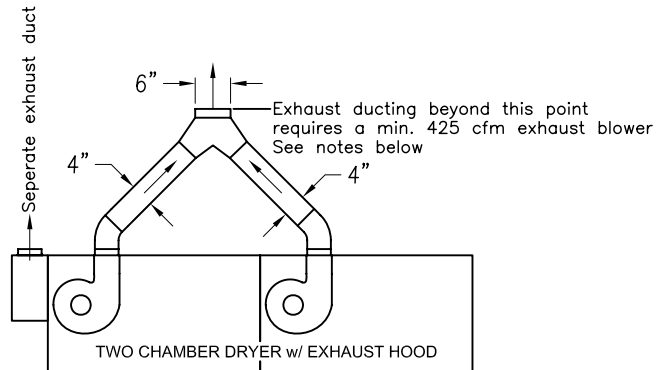
Exhaust blower damage will result
WRONG



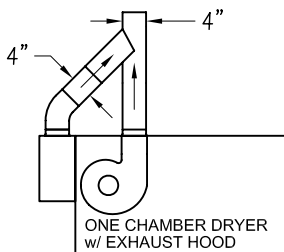
SEPERATE EXHAUST DUCTS
See notes 1 & 2
ACCEPTABLE



45° TEE WYE DUCTING
Exhaust stack blower is required
See notes 1 & 2
ACCEPTABLE

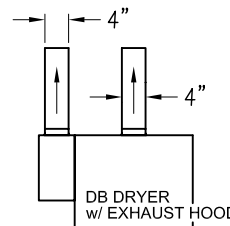


WYE JOINT DUCTING
Exhaust stack blower is required
See notes 1 & 2
PREFERRED

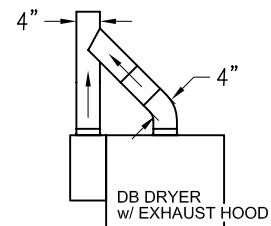


45° TEE WYE DUCTING
See notes 1 & 2
ACCEPTABLE

EC-I & DB SERIES DRYERS



SEPERATE EXHAUST DUCT
See note 1 & 3
ACCEPTABLE



45° TEE WYE DUCTING
See note 1 & 3
PREFERRED

Note:

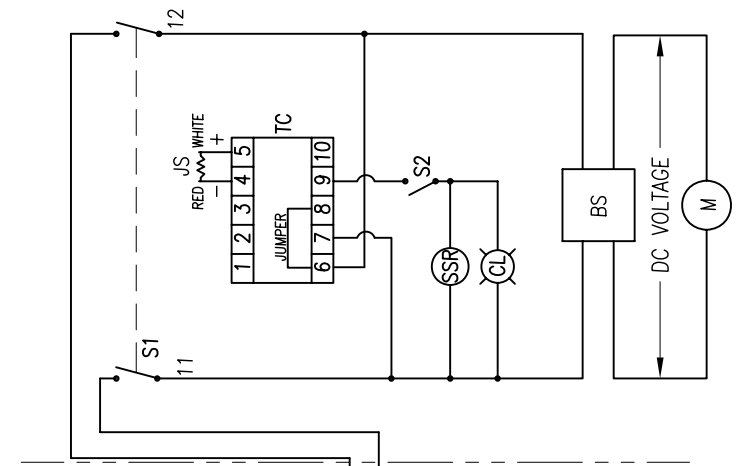
- 1.) If the exhaust duct length is greater than 6ft. and/or if more than one elbow is used, an exhaust booster is required.
- 2.) EC-II Dryers with exhaust duct lengths greater than 20ft. consult a HVAC installer to determine proper size duct to maintain min. of 425 cfm.
- 3.) DB Dryers with exhaust duct lengths greater than 20ft. consult a HVAC installer to determine proper size duct to maintain min. of 250 cfm.

02-07-003

F.L.A. @ 240V = 16AMPS

04-03-149
CORDSET FOR
CONTINENTAL
EUROPE ONLY

04-03-127
240V CORDSET
NEMA 6-20P



HEATER CIRCUIT

REVISIONS			
REV	DESCRIPTION	DATE	BY
A	Controller TEC 9090 was TEC 220	02/20/08	CD
B	ADDED SSR, S2, BS, M, AND TC WAS (04-01-082)	5/1/08	MIKE

LEGEND

DESCRIPTION	PART NO.
BS - 90VDC BELT CONTROL	04-01-005
CL - 250V RELAY COIL LIGHT	04-03-022
F1 & F2 - 250V 3 AMP AGC SYSTEM FUSE	04-03-025
HTR - 240V 3500 WATT IR HEATERS	H-1824
JS - SENSOR "TYPE J"	04-01-080
M - 90VDC GEAR MOTOR	04-02-005
OL - 250V RELAY RED OUTPUT LIGHT	04-03-021
P - 250V POWER CORD NEMA 6-20P	04-03-127
PL - 250V MAIN RED POWER LIGHT	04-03-021
S1 - DPST SYSTEM SWITCH	04-01-068
S2 - SPST HEAT SWITCH	04-01-025
SSR - 250V 50A SS RELAY AC COIL	04-01-094
TC - TEMP. CONTROL DIGITAL	04-01-081

SCREEN PRINTING MACHINERY SINCE 1960 VASTEX.COM		VASTEX INTERNATIONAL	
TOLERANCES UNLESS OTHERWISE SPECIFIED .XXX .XX .X ±.010 ±.015 ±.032 DECIMAL FRACTION ANGLE ±1/16 ±1°		TITLE: EC-1 WIRING DIAGRAM 240 VOLT, 3 WIRE (AND EC-1-EU)	
BY CD	DATE 1/26/07	SIZE B	DRAWING NO. 02-07-003
DRAWN CD	CHECKED CD	REV# B	SCALE: NONE SHEET 1 OF 1

Vastex Warranty

Doc#01-00-005B Revised 10/15/07

(1.) Vastex, hereinafter referred to as “seller” warrants only to its original “purchaser”, who holds a copy of the original invoice and is the original end user of the equipment in question, its new equipment against defects in materials or workmanship on a pro-rated basis. Warranty period begins from date of shipment to the buyer and will only apply to customers paid in full. Warranty periods are as follows: one (1) year for E-1000, and V-1000, three (3) years for all other equipment (including F-Flash), ten (10) years for infrared heaters (excluding F-Flash) installed by Vastex in a new dryer, three (3) years for replacement infrared heaters, and one (1) year for replacement parts. Rubber blankets, light bulbs and glass on exposure units are particularly subject to wear while in use. Wear is not covered by this warranty but as stated above only manufacturers defects are covered. All sales made through Vastex dealers must be certified by that dealer before a warranty replacement is issued.

(2.) This warranty is expressly contingent upon the buyer delivering to seller, at the address below, with all transportation charges prepaid, the part or parts claimed to be defective within the above mentioned warranty periods stated in paragraph one. The defective part or parts will be repaired or replaced at the discretion of Vastex International, Inc. If the equipment in question is less than one (1) year old, it will be shipped to the customer at no charge, with an RGA issued by Vastex for the defective part. The defective part must be shipped back to Vastex freight prepaid within 30 days or the account will be billed. If the equipment is more than a year old, the part will be shipped after we receive the defective part. If it's necessary to expedite the movement of parts and to minimize down time to the buyer, the replacement part shall be supplied on a C.O.D. basis. If testing and analysis of said part by the seller or its supplier discloses that said part is defective, the cost of said part will be refunded to the buyer on a prorated basis.

(3.) Except as otherwise provided herein, the equipment is being sold “as-is”. Final determination of the suitability of the equipment for the use contemplated by the buyer, is the sole responsibility of buyer, and seller shall have no responsibility in connection with the suitability.

(4.) All warranties implied by law, including the implied warranties of merchantability and fitness are hereby limited to workmanship and defective parts to a warranty period stated in paragraph one. The express warranty and remedies contained herein and such implied limited warranties are made solely to the sole warranties and remedies and are in lieu of all other warranties, guarantees, agreements, and other liabilities, whether express or implied, and all other remedies for breach of warranty or any other liability of seller, in no event shall seller be liable for consequential damages.

No person, agent, distributor, or service representative is authorized to change, modify or extend the terms hereof in any manner whatsoever.

These terms and conditions are an essential part of the transaction between the parties and constitute the entire agreement between them with respect to the same.

Some states do not allow limitation on how long an implied warranty lasts of the exclusion or limitation of incidental, or consequential damages, so the above limitation may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Infrared heaters are the only replacement parts covered for a period of (3) years from date of shipment and contingent to receipt of payment in full.

Electrical components can not be returned once installed unless proven defective.
Please refer to doc. 01-01-006 for warranty implementation help.
Please refer to doc. 01-00-015 for specific terms and conditions of sale and the limited warranty.
Please refer to doc. 01-00-017 for V-2000HD printer warranty.

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VASTEX WARRANTY IMPLEMENTATION SHEET

Please read this document in order to fully understand the warranty.

Doc.# 01-00-006

Your new Vastex equipment is protected against *manufacturers' defects by our warranty, completely explained in doc# 01-00-017 for the V2000-HD series manual printer and in doc# 01-00-005 for all other Vastex manufactured equipment. Please refer to these documents for the **warranty term and specific concerns about the warranty. The following are some important facts and requirements for the proper implementation of the warranty.

1.0 Everything is covered!

2.0 **Warranty Term is defined as: Ship date from VASTEX to the date the item in question is returned to VASTEX for inspection and repair.

3.0 *Manufacturers defects are defined as: Parts determined to be defective in workmanship which will lead up to a premature failure. The determination will be made only by the manufacturer of the item in question.

4.0 To take advantage of the warranty the following steps must be taken:

- 4.1 The equipment must be paid for in full.
- 4.2 The item in question must be shipped to VASTEX for evaluation with all shipping costs incurred by the buyer.
- 4.3 If the item is deemed as a manufacturer's defect it will be repaired or replaced within 2 business days from the time received. The shipping cost back to the customer located in the continental United States will be paid by VASTEX if a warranty item.
- 4.4 **If the item in question must be replaced immediately and is more than a year old, it will have to be purchased at list price and will be shipped COD. A pro-rated credit will be given promptly if the returned item is a valid manufacturer's defect.**
- 4.5 If the equipment was shipped less than a year before the date of the service call and a technician confirms the part needed for repair, the replacement will be shipped before the replacement is shipped back. An RGA will be issued and must accompany the old part to VASTEX within 30 days or the account will be billed.

5.0 Important facts about the condition of shipped equipment:

- 5.1 Dryers are partially assembled with the belts tracked and the machine run at full temperature for a min. of 1 ½ hours.
- 5.2 Printers are partially assembled, inspected, and adjusted for all heads down prior to partial disassembly and packing.
- 5.3 Exposing units are fully assembled and tested with the maximum screen size for vacuum integrity, timer operation and light output.

6.0 This document is in addition to the standard warranty and only helps the customer understand how to take advantage of the warranty. In no way does this document override the standard warranty or the terms and conditions of sale and the limited warranty doc# 01-00-015.

Please see doc# 01-00-015 for specific terms and conditions of sale and the limited warranty

VASTEX
INTERNATIONAL

1032 N. IRVING ST.
ALLENTOWN PA. 18109 USA

Vastex International, Inc.

TERMS AND CONDITIONS OF SALE AND LIMITED WARRANTY Doc.#01-00-015

1. Buyer's order will constitute an offer in accordance with the terms hereof and such offer, upon acknowledgment of Seller, will constitute the agreement between Buyer and Seller. Buyer's order after such acknowledgment by Seller will not be subject to cancellation, change or reduction in amount, or suspension by Buyer of deliveries, unless prior to such action Buyer has obtained Seller's written consent. Notwithstanding anything to the contrary in Buyer's Purchase Order or other communications, the parties agree to be bound by these Terms and Conditions. Acceptance of the product by the Buyer shall be deemed to constitute unconditional acceptance of these Terms and Conditions.

2. Any of these terms, conditions and provisions of Buyer's order which are inconsistent with Seller's acknowledgment and these Terms and Conditions of Sale shall not be binding on the Seller and shall be considered not applicable to any sale so made. No waiver, alteration or modification of any of the provisions on either side of the document shall be binding upon Seller unless agreed to in writing by Seller.

3. (a) All prices are F.O.B. Seller's Plant and method of delivery and routing shall be at Seller's discretion, unless specifically otherwise stated herein. Notwithstanding any agreement to pay freight, delivery of products purchased hereunder to a common carrier or licensed trucker shall constitute delivery to Buyer and be determinative of the date and time of shipment and all risk of loss or damage in transit shall be borne by Buyer. If the Buyer fails to accept the goods from the common carrier or licensed trucker, the Seller shall be entitled to claim payment from the Buyer. Seller shall arrange for storage, the risk and the cost, including insurance costs, to be borne by the Buyer (and Buyer agrees to pay such amounts upon demand) except if the failure to accept delivery is due to any of the exceptions noted in Paragraph 4.

(b) Terms of payment shall be as stated on invoice.

4. It is understood that deliveries will be made in accordance with Seller's regular production schedule. Every reasonable effort will be made to meet the Buyer's required delivery dates but Seller will not be liable for damages or be deemed to be in default by reason of any failure to deliver or delay in delivery due to any preference, priority, allocation or allotment order issued by the Government, whether Federal, State or local, or causes beyond its control including but not limited to, Acts of God or a public enemy, acts of Government, fires, floods, epidemics, quarantine restrictions, strikes, lockouts, freight embargoes, severe weather, unavailability of materials or shipping space, delays of carriers or suppliers or delays of any subcontractors. Should delay in delivery be caused by any of the circumstances mentioned in this paragraph, such extension of the delivery period shall be granted as is reasonable under the circumstances of the case. Should delay be caused by an event not specifically mentioned in this paragraph, damages will be limited to cancellation of the purchase order without penalty, and refund of any monies deposited or prepaid on the purchase order with no liability for any consequential or incidental damages.

5. Seller reserves the right to increase the prices prior to Seller's acceptance of order and/or after expiration of any price quoted by Seller.

6. Unless otherwise stated in writing, Seller's prices do not include sales, excise, value-added or other taxes. Consequently, in addition to the price specified herein, the amount of any present or future sales, use, excise, value-added or other tax applicable to the manufacture, sale, purchase or use of the products hereunder shall be paid by Buyer, or in lieu thereof, Buyer shall provide Seller with a valid tax exemption certificate acceptable to the taxing authorities.

7. Seller reserves the right, at any time, to revoke any credit extended to Buyer because of Buyer's failure to pay for any products when due or for any other reason deemed good and sufficient by Seller and in such event, all subsequent shipments shall be paid for prior to at delivery at Seller's option.

8. (a) SELLER'S LIABILITY SHALL BE LIMITED TO SELLER'S STATED SELLING PRICE PER UNIT OF ANY DEFECTIVE GOODS AND SHALL IN NO EVENT INCLUDE BUYER'S MANUFACTURING COSTS, LOST PROFITS, GOODWILL, OR ANY OTHER SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES, ARISING OUT OF THE AGREEMENT, THIS CONTRACT, THE SALE OF THE PRODUCTS TO THE BUYER OR THE USE OR THE PERFORMANCE OF THE PRODUCTS. Seller may at its discretion repair, replace or give the Buyer credit (pro-rated) for such defective products.

(b) Notwithstanding anything herein to the contrary, Seller shall have no liability for alleged defects with the products which are not specified in written notice from the Buyer to the Seller within thirty-six (36) months from the date of shipment of machines. Seller shall pass to Buyer any warranty received by Seller from the manufacturer of Limited Life Components, which in most cases is 12 to 18 months.

(c) Seller shall have no liability under this Limited Warranty unless Buyer has paid in full for the products. Further, this Limited Warranty is expressly contingent on Buyer's delivery to Seller, all costs prepaid, the defective part(s) within thirty-six (36) months of shipment to Buyer, together with a written statement specifying the alleged defect(s). Any replacement part(s) shall be shipped to Buyer on a C.O.D. basis.

(d) SELLER SPECIFICALLY EXCLUDES ALL WARRANTIES, EXPRESSED, IMPLIED OR OTHERWISE, EXCEPT AS STATED EXPLICITLY IN THESE TERMS AND CONDITIONS OF SALE. SELLER DISCLAIMS THE WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

9. The remedies herein reserved by Seller shall be cumulative and in addition to any other legal remedies. No waiver of a breach of any portion of this contract shall constitute a waiver of continuing or future breach of such provision or of any other provisions hereof.

10. These Terms and Conditions constitute the entire agreement of the parties. No amendments, changes, revisions or discharges hereof in whole or in part shall have any force or effect unless set forth in writing and signed by the parties hereto. This contract shall not be assignable by Buyer voluntarily by operation of law or otherwise without Seller's written consent.

11. This contract shall be governed and shall be construed according to the domestic laws of the Commonwealth of Pennsylvania.

12. Anything herein to the contrary notwithstanding, any action for alleged breach by Seller of the contract between the parties, including but not limited to any action for breach of the warranties herein set forth, shall be barred unless commenced by Buyer within one (1) year from the date such cause of action accrued.

13. This agreement shall inure to the benefit of and be binding upon the parties hereto, their respective successors and permitted assigns.

14. **All notices required by this contract to be given by either party shall be sent in writing or by facsimile and shall be addressed to the last known address of such other party. Notices shall be deemed to have been received on the fifth business day following deposit in the mail.**